

AMENDMENTS TO THE SPECIFICATION

Please amend paragraphs 70 to 81 of the specification as follows:

[0070] [[FIG. 3]] FIG. 4 is a block diagram that illustrates a computer system [[140]] 400 upon which the method may be implemented. The method is implemented using one or more computer programs running on a network element such as a router device. Thus, in this embodiment, the computer system [[140]] 400 is a router.

[0071] Computer system [[140]] 400 includes a bus [[142]] 402 or other communication mechanism for communicating information, and a processor [[144]] 404 coupled with bus [[142]] 402 for processing information. Computer system [[140]] 400 also includes a main memory [[146]] 406, such as a random access memory (RAM), flash memory, or other dynamic storage device, coupled to bus [[142]] 402 for storing information and instructions to be executed by processor [[144]] 404. Main memory [[146]] 406 also may be used for storing temporary variables or other intermediate information during execution of instructions to be executed by processor [[144]] 404. Computer system [[140]] 400 further includes a read only memory (ROM) [[148]] 408 or other static storage device coupled to bus [[142]] 402 for storing static information and instructions for processor [[144]] 404. A storage device [[150]] 410, such as a magnetic disk, flash memory or optical disk, is provided and coupled to bus [[142]] 402 for storing information and instructions.

[0072] A communication interface [[158]] 418 may be coupled to bus [[142]] 402 for communicating information and command selections to processor [[144]] 404. Interface [[158]] 418 is a conventional serial interface such as an RS-232 or RS-422 interface. An external terminal [[152]] 412 or other computer system connects to the computer system [[140]] 400 and provides commands to it using the interface [[158]] 418. Firmware or software running in the computer system [[140]] 400 provides a terminal interface or character-based command interface so that external commands can be given to the computer system.

[0073] A switching system [[156]] 416 is coupled to bus [[142]] 402 and has an input interface and a respective output interface (commonly designated [[159]] 419) to external network elements. The external network elements may include a plurality of additional routers 160 or a local network coupled to one or more hosts or routers, or a global network such as the Internet having one or more servers. The switching system [[156]] 416 switches information traffic arriving on the input interface to output interface [[159]] 419 according to pre-determined protocols and conventions that are well known. For example, switching system [[156]] 416, in cooperation with processor [[144]] 404, can determine a destination of a packet of data arriving on the input interface and send it to the correct destination using the output interface. The destinations may include a host, server, other end stations, or other routing and switching devices in a local network or Internet.

[0074] The computer system [[140]] 400 implements as a router acting as a node the above described method generating routing information. The implementation is provided by computer system [[140]] 400 in response to processor [[144]] 404 executing one or more sequences of one or more instructions contained in main memory [[146]] 406. Such instructions may be read into main memory [[146]] 406 from another computer-readable medium, such as storage device [[150]] 410. Execution of the sequences of instructions contained in main memory [[146]] 406 causes processor [[144]] 404 to perform the process steps described herein. One or more processors in a multi-processing arrangement may also be employed to execute the sequences of instructions contained in main memory [[146]] 406. In alternative embodiments, hard-wired circuitry may be used in place of or in combination with software instructions to implement the method. Thus, embodiments are not limited to any specific combination of hardware circuitry and software.

[0075] The term “computer-readable medium” as used herein refers to any medium that participates in providing instructions to processor [[144]] 404 for execution. Such a medium may take many forms, including but not limited to, non-volatile media, volatile media, and transmission media. Non-volatile media includes, for example, optical or magnetic disks, such

as storage device [\[\[150\]\] 410](#). Volatile media includes dynamic memory, such as main memory [\[\[146\]\] 406](#). Transmission media includes coaxial cables, copper wire and fiber optics, including the wires that comprise bus [\[\[142\]\] 402](#). Transmission media can also take the form of wireless links such as acoustic or electromagnetic waves, such as those generated during radio wave and infrared data communications.

[0076] Common forms of computer-readable media include, for example, a floppy disk, a flexible disk, hard disk, magnetic tape, or any other magnetic medium, a CD-ROM, any other optical medium, punch cards, paper tape, any other physical medium with patterns of holes, a RAM, a PROM, and EPROM, a FLASH-EPROM, any other memory chip or cartridge, a carrier wave as described hereinafter, or any other medium from which a computer can read.

[0077] Various forms of computer readable media may be involved in carrying one or more sequences of one or more instructions to processor [\[\[144\]\] 404](#) for execution. For example, the instructions may initially be carried on a magnetic disk of a remote computer. The remote computer can load the instructions into its dynamic memory and send the instructions over a telephone line using a modem. A modem local to computer system [\[\[140\]\] 400](#) can receive the data on the telephone line and use an infrared transmitter to convert the data to an infrared signal. An infrared detector coupled to bus [\[\[142\]\] 402](#) can receive the data carried in the infrared signal and place the data on bus [\[\[142\]\] 402](#). Bus [\[\[142\]\] 402](#) carries the data to main memory [\[\[146\]\] 406](#), from which processor [\[\[144\]\] 404](#) retrieves and executes the instructions. The instructions received by main memory [\[\[146\]\] 406](#) may optionally be stored on storage device [\[\[150\]\] 410](#) either before or after execution by processor [\[\[144\]\] 404](#).

[0078] Interface [\[\[159\]\] 419](#) also provides a two-way data communication coupling to a network link that is connected to a local network. For example, the interface [\[\[159\]\] 419](#) may be an integrated services digital network (ISDN) card or a modem to provide a data communication connection to a corresponding type of telephone line. As another example, the interface [\[\[159\]\] 419](#) may be a local area network (LAN) card to provide a data communication connection to a compatible LAN. Wireless links may also be implemented. In any such implementation, the

interface [\[\[159\]\] 419](#) sends and receives electrical, electromagnetic or optical signals that carry digital data streams representing various types of information.

[0079] The network link typically provides data communication through one or more networks to other data devices. For example, the network link may provide a connection through a local network to a host computer or to data equipment operated by an Internet Service Provider (ISP). The ISP in turn provides data communication services through the world wide packet data communication network now commonly referred to as the “Internet”. The local network and the Internet both use electrical, electromagnetic or optical signals that carry digital data streams. The signals through the various networks and the signals on the network link and through the interface [\[\[159\]\] 419](#), which carry the digital data to and from computer system [\[\[140\]\] 400](#), are exemplary forms of carrier waves transporting the information.

[0080] Computer system [\[\[140\]\] 400](#) can send messages and receive data, including program code, through the network(s), network link and interface [\[\[159\]\] 419](#). In the Internet example, a server might transmit a requested code for an application program through the Internet, ISP, local network and communication interface [\[\[158\]\] 418](#). One such downloaded application provides for the method as described herein.

[0081] The received code may be executed by processor [\[\[144\]\] 404](#) as it is received, and/or stored in storage device [\[\[150\]\] 410](#), or other non-volatile storage for later execution. In this manner, computer system [\[\[140\]\] 400](#) may obtain application code in the form of a carrier wave.